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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,768	10/11/2000	Jeff Schulz	FORE-77	7087

7590 02/17/2004

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EXAMINER
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PHAN, MAN U

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 02/17/2004

2

Please find below and/or attached an Office communication concerning this application or proceeding.

*[Handwritten mark]*

# Office Action Summary

Application No.  
09/686,768

Applicant(s)  
Schulz

Examiner  
Man Phan

Art Unit  
2665



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Oct 11, 2000
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 5-10 and 15-19 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Oct 11, 2000 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

### DETAILED ACTION

1. The application of Schulz for the "Dual optimality for different data rate backplane transfer" filed 10/11/2000 has been examined. Claims 1-19 are pending in the application.

#### *Specification*

2. The disclosure is objected to because of the following informalities:

The status of the related application USSN# noted on page 1 need to be updated. S/N 09/609,177 is now US Patent # 6,654,370, and S/N 09/609,497 is now US Patent # 6,473,433. Appropriate correction is required.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given

in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The Abstract of the disclosure is objected to because it should not contain more than 25 lines or 250 words. Correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bianchini, Jr. et al. (US#6,463,063) in view of Dempsey (US#6,526,021).

With respect to claims 1-4, both Bianchini, Jr. et al. (US#6,463,063) and Dempsey (US#6,526,021) disclose a novel method and system for the transfer of data of connections at various rate, especially in exchanging traffic between OC48 and OC192 ports, according to the essential features of the claims. Bianchini, Jr. provides in Fig. 7 a schematic diagram illustrated a switching system for transferring data from an interface having a first rate (*input port*) over a connection mechanism having a second rate (*output*

port). Bianchini Jr. discloses a switch 10 for switching fixed size ATM cells and variable length packets of a network 12. The switch 10 comprises an input port mechanism 14 having a plurality of input ports 16 each able to receive cells and packets from the network 12. The switch 10 comprises an output port mechanism 18 having a plurality of output ports 20 each able to send cells and packets to the network 12. The switch 10 comprises a switching fabric 22 connected to the input port mechanism 14 and the output port mechanism 18 for switching either packets or cells from any input port 16 to any output port 20. The switch 10 comprises a mechanism for converting packets to cells when the input port 16 is a packet port and the output port 20 is a cell port and cells to packets when the input port 16 is a cell port and the output port 20 is a packet port, respectively, or not converting cells or packets when the input port 16 and the output port 20 are both cell ports or both packet ports, respectively. The converting occurs after the cell or packet has traversed this fabric. Preferably, the converting mechanism 24 is connected to the output port mechanism 18 and the switching fabric 22 (Col. 1, lines 40 plus). Bianchini further teaches in Fig. 2 an OC48 Port Card, in which the OC192 port card supports a single 10G stream to the fabric and between a 10G and 20G egress stream. This board also uses 4 stripers and 4 unstriper, but the 4 chips operate in parallel on a wider data bus. The data sent to each fabric is identical for both OC48 and OC192 ports so data can flow between the port types without needing special conversion functions (*dividing the higher data rate connections into data pipes having the same rate as the data pipes formed from the lower rate connections*) (See also Fig. 8; Col. 8, lines 53 plus).

In the same field of endeavor, Dempsey (US#6,526,021) provides a system and method for transporting synchronous optical network data more rapidly using an N terminal high speed transport system coupled between 1:N low speed transport systems. Dempsey teaches in Fig. 3 illustrated the clear channel transport system that increases the transport capacity per channel by multiplexing each lower rate working channel of a low rate transport system into separate higher rate channels of a clear channel high rate SONET transport system. With reference to Fig. 3, terminal 20 can transmit OC48 SONET transport signal W.sub.11 across working channel 22 to high speed terminal 110. Likewise, terminal 30 sends transport signal W.sub.21 across channel 32, terminal 40 sends transport signal W.sub.31, across channel 42, and terminal 50 sends transport signal W.sub.41 across channel 52 to high speed terminal 110. High speed terminal 110 will receive each of the incoming transport signals W.sub.11, W.sub.21, W.sub.31, and W.sub.41 and will electrically package these signals as one OC192 signal W.sub.1 and transport the entire signal W, to high speed terminal 150 across working channel 115. This electronic packaging can be done through electrical multiplexing or, alternatively, through optical multiplexing (Col. 4, lines 52 plus).

Regarding claims 11-14, they are method claims corresponding to the apparatus claims 1-4 above. Therefore, claims 11-14 are analyzed and rejected as previously discussed with respect to claims 1-4.

One skilled in the art would have recognized the need for effectively and efficiently processing telecommunications signaling in SONET frame data between different line rates, and would have applied Dempsey's teaching of the SONET format

signal transport system into Bianchini Jr.'s novel use of the a switch for switching both variable length packets and fixed length ATM cells of a network. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Dempsey's clear channel 1:N SONET transport system and method into Bianchini's receiver makes right with the motivation being to provide a method and system for performing transfer connections of SONET framed data between different line rates.

***Allowable Subject Matter***

6. Claims 5-10 and 15-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for the indication of allowable subject matter: The prior art of record fails to disclose or suggest wherein the second port card maps the data received at the second rate onto the bus in 4 bit interleaved fashion, and N equals 4, as specifically recited in claims 5 and 15.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Quirks et al. (US#6,654,370) is cited to show the backplane synchronization in a distributed system with clock drift and transport delay.

The Spagnolo et al. (US#6,526,024) is cited to show the synchronization of asynchronous back-pressure from one destination to multiple sources.

The Bianchini, Jr. et al. (US#6,473,433) is cited to show the queue resynch: synchronous real-time upgrade of a distributed switching system.

The Zhou et al. (US#6,473,435) is cited to show the method and apparatus for transferring packets to a memory.

The Wilford et al. (US#6,687,247) is cited to show the architecture for high speed class of service enabled line card.

The Takase et al. (US#6,034,954) is cited to show the multiplexing apparatus for transit of signal between service provided by low-speed transmission path and ATM service provided by high-speed transmission path.

The Aggarwal et al. (US#6,275,508) is cited to show the method and system for processing datagram headers for high speed computer network interfaces at low clock speeds, utilizing scalable algorithms for performing such network header adaptation.

The Russell et al. (US#6,496,519) is cited to show the frame based data transmission over synchronous digital hierarchy networks.

The Verma (US#6,215,772) is cited to show the dynamic parameter estimation for efficient transport of HPR data on IP.

The St. John et al. (US#5,581,566) is cited to show the high-performance parallel interface to synchronous optical network gateway.



The Upp et al. (US#5,040,170) is cited to show the system for cross-connecting high speed digital signals.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (703)305-1029. The examiner can normally be reached on Mon - Fri from 6:30 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

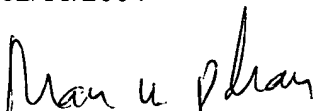
**or faxed to:** (703) 305-9051, (for formal communications intended for entry)

**Or:** (703) 305-3988 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021  
Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Mphan

02/11/2004

  
**MAN PHAN**  
**PATENT EXAMINER**